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ABSTRACT

The role of context in language is so obvious that, paradoxically, it often goes unnoticed by students who are studying it. Newspaper headlines (real and contrived) can be used to demonstrate to students the context dependency of language. The simplest version of such a demonstration takes 5 minutes; the longest version takes about 20 minutes. Students in two classes were presented with a demonstration. Fifty students in the first class read the headlines to judge their reality; 48 students in the second class assessed whether the headlines were real and were asked to generate interpretations of others. Results indicated that when students were told only to read the headlines, they tended to identify the obvious meanings of the headlines, even when the intended meaning was not the obvious one. The different forms of the demonstration are useful in different ways, depending on how much time is spent on the topic of ambiguity. The short version is suitable for a quick demonstration of some fairly general points; the longer versions generate results that lead to deeper discussion of the role of context in comprehension. (One table of data is included; the short and long versions of the demonstration are attached.) (RS)

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Using Headlines to Illustrate the Role of Context in Language Processing

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Using Headlines to Illustrate the Role of Context in Language Processing

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The role of context in language is so obvious that, paradoxically, it often goes unnoticed by students who are studying it. For example, the two speciously similar syntactic structures in "I saw the cow grazing in the pasture" and "I saw the grand canyon flying to New York" would never be regarded as having the same deep structure (as noted in Rumelhart, 1977). The present demonstration is designed to show that, without knowning it, people generate ambiguity that requires knowledge of context for adequate interpretation. The following stimuli have appeared in conventional newspapers (except for three "catch" trials) and were probably totally unambiguous to the headline writer when they were written. The context-dependent headlines were collected by the Columbia Journalism Review Editors (1980). The problem arises in this case because headlines are constructed to fit into a very limited space while communicating the nature of the story below it. Consequently, many of the functors and other "trivial" words that we normally use to disambiguate our sentences are missing. The headlines in this verbal demonstration resemble the drawings that are often used to create visual illusions; that is, when normally useful cues are missing in a drawing, we attempt to use the remaining cues however we can, resulting in interpretations that are not always veridical. One difference between these verbal illusions and visual illusions is that we can create the correct context with the headlines if given appropriate information; at that time, the verbal illusion, or ambiguity, disappears. With visual illusions, the ambiguity persists even when we know the nature of the illusion (e.g., the Ames room).

DIRECTIONS FOR USING THIS DEMONSTRATION

There are different ways to present this material to students, depending on the time alloted for demonstrations in class. The simplest version takes five minutes perhaps; the longest version takes about twenty; at times, discussion and student response will extend the time needed to complete the exercise.

1. SHORT VERSION: Simply make an overhead transparency of the headlines below (Example 1) and present them to the students. Initially, the students may not note anything unusual and regard the stimuli merely as unusual headlines. After a minute or so, proceed through the headlines and interpret them as the headline writer intended. Typically, the students begin to see the humor of the situation at this point. The demonstration is effective. It surprises me that the students need to be shown the alternate meanings of the headlines; often the class as a whole will not see the humor until it is pointed out directly.

2. LONG VERSION: Pass out a sheet like that in Example 2 and ask the students to decide whether they think that each item is likely to have appeared in a legitimate newspaper. On side one of the page, they should merely circle "Yes" or "No." For side two, they should write an interpretation of the headline and then indicate whether they think that the item had appeared in a newspaper. This approach allows you to compare

the ways that students process the information when they take the path of least resistance and consider only the most obvious interpretation, as opposed to the situation in which they must be more active in assigning meaning. As a rule, when they read and interpret headlines, they are more likely to stumble on to the intended meaning; reading alone often results in an inappropriate interpretation.

RESULTS OF COMPARISON OF TWO CLASSES

Table 1 illustrates the results for those headlines that were most frequently and least frequently identified as being legitimate. Students in Class A only read the headlines to judge their reality; students in Class B read some of the sentences and assessed whether the headlines were real, but were asked to generate interpretations of others. The results indicate that when students are told only to read the headlines, they tend to identify the obvious meanings of the headlines, even when the intended meaning is not the obvious one. On the other hand, when they are asked to read and interpret headlines, they consider non-obvious interpretations of context-dependent headlines. Thus, for a headline like "Program Reaches Out To County Kids," students show no difference in the proportion who agree that it was actually a headline, depending on whether they only read the item, compared to reading and interpreting it. On the other hand, for context-dependent headlines like "Stud tires out," there is a significant shift (viz., an increase) in the proportion of students who see it as legitimate, presumably because they consider different meanings of the words as well as alternate syntax. (Regression to the mean is not a useful explanation for shifts in proportions because in the Read Only conditions, the proportions do not change, even though they start out as extreme as those in the Read and Interpret condition.)

The different forms of this demonstration are useful in different ways, depending on how much time one intends to spend on the topic of ambiguity. The short version is suitable for a quick demonstration of some fairly general points; the longer versions generate results that lead to deeper discussion of the role of context in comprehension.

References

Rumelhart, D. E. (1977). Introduction to human information processing. New York: Wiley.

Columbia Journalism Review Editors. (1980). Squad help dog bit victim & other flubs from the nation's press. New York: Doubleday.

USING HEADLINES TO ILLUSTRATE THE ROLE OF CONTEXT IN LANGUAGE PROCESSING

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Table 1. Proportion of headlines thought to be legitimate as a function of whether they were context-dependent or context-independent and according to directions given to students. (N = 50 for Class A and 48 for Class B)

	CLASS A Read Only	CLASS B Read Only	DIFFERENCE Z-VALUE	P
CONTEXT-FREE HEADLINES	.96	.93(a)	+0.66	.51
	.96	.93(b)	+0.66	.51
	Read Only	Read & Interpret		
	.82	.88(c)	-1.13	.26
	.88	.95(d)	-1.18	.24

(a) Program Reaches Out To County Kids
(b) Police Crash Kills Woman
(c) Bush Keeps Option To Make Poison Gas
(d) Cornell Hockey Honored By Elks

	CLASS A	CLASS B	DIFFERENCE Z VALUE	P
	Read Only	Read Only		
CONTEXT-DEPENDENT HEADLINES	.30	.44(e)	-1.40	.16
	.32	.37(f)	-0.51	.61
	Read Only	Read & Interpret		
	.18	.47(g)	-3.01	.002
	.24	.44(h)	-1.99	.05

(e) Drunk Gets Nine Months in Violin Case
(f) Stud Tires Out
(g) Lucky Man Sees Pals Die
(h) Cooper Feels Secretaries More Than Clerks

(Examples used in presentation at the 98th convention of the American Psychological Association)

DID THESE HEADLINES APPEAR AS HEADLINES IN LEGITIMATE NEWSPAPERS?

1. PROGRAM REACHES OUT TO COUNTY KIDS

2. ASTRONAUT ACCIDENTALLY LEFT IN SPACE AS SHUTLE RETURNS

3. STUD TIRES OUT

4. CORNELL HOCKEY HONORED BY ELKS

5. LUCKY MAN SEES PALS DIE

6. BUSH KEEPS OPTION TO MAKE POISON GAS

7. POLICE CRASH INJURES WOMAN

8. CHESTER MORRILL, 92, WAS FED SECRETARY

9. IRAN LINKS RELEASE OF HOSTAGES TO ASSETS

10. FARMER BILL DIES IN HOUSE

Example 2: Long Version

Page 1
Directions: For each of the following phrases and sentences, you should decide whether it occurred as a headline in a legitimate newspaper. Circle either "Yes" or "No." (If it may have appeared in one of the lurid tabloids, judge it as not likely to have occurred in a serious newspaper.) In the event that a proper name of an individual or city appears, you should assume that the name is legitimate.

1.	Yes	No	PROGRAM REACHES OUT TO COUNTY KIDS
2.	Yes	No	CAT SOLVES THREE MURDERS
3.	Yes	No	GRETZKY SICK OVER 7-4 BLACKHAWKS' VICTORY
4.	Yes	No	BILL WOULD PERMIT ADS ON EYEGLASSES
5.	Yes	No	DRUNK GETS NINE MONTHS IN VIOLIN CASE
6.	Yes	No	LANSING IN DRIVER'S SEAT IN DIVISION RACE
7.	Yes	No	TWO SENATORS HAD SISTER-MISTRESSES
8.	Yes	No	MAN GETS 90 DAYS FOR KILLING CAT
9.	Yes	No	STUD TIRES OUT
10.	Yes	No	SURVIVOR OF SIAMESE TWINS JOINS PARENTS
11.	Yes	No	ASTRONAUT ACCIDENTALLY LEFT IN SPACE AS SHUTTLE RETURNS
12.	Yes	No	POLICE CRASH INJURES WOMAN
13.	Yes	No	SOME BIG EARNERS AVOID TAXES
14.	Yes	No	IRAN LINKS RELEASE OF HOSTAGES TO ASSETS
15.	Yes	No	MAN ROBS, THEN KILLS HIMSELF

Page Two
For each "headline" on this side of the paper, write a brief sentence giving your interpretation of what the phrase or sentence means and then circle your answer.

16.	Yes	No	ASTRONAUTS PHOTOGRAPH EARTH
17.	Yes	No	SCSC GRADUATES BLIND SENIOR CITIZEN
18.	Yes	No	EASY CHANGES CAN LOWER FAT IN DIET
19.	Yes	No	PROSTITUTES APPEAL TO POPE
20.	Yes	No	WOMAN KILLS MAN BY BITING HIS EARS OFF
21.	Yes	No	BUSH KEEPS OPTION TO MAKE POISON GAS
22.	Yes	No	BONES BACK BEASTLY TALE OF OLD WEST
23.	Yes	No	3 FLOWN TO U.S. TO BE CHARGED AS DRUG SELLERS
24.	Yes	No	CHESTER MORRILL, 92, WAS FED SECRETARY
25.	Yes	No	COMPLAINTS ABOUT NBA REFS GROWING UGLY
26.	Yes	No	BROWN CANCELS SOME SOCIAL EVENTS
27.	Yes	No	BAN ON SOLICITING DEAD IN TROTWOOD
28.	Yes	No	CORNELL HOCKEY HONORED BY ELKS
29.	Yes	No	LUCKY MAN SEES PALS DIE
30.	Yes	No	COOPER FEELS SECRETARIES MORE THAN CLERKS
31.	Yes	No	FARMER BILL DIES IN HOUSE

Interpretations of context-dependent headlines
(Obvious interpretations have been omitted)
Key: Obvious means that the apparent interpretations is appropriate
False means that the headline did not appear in a newspaper
CD (Context-dependent) means that the apparent meaning may be deceptive

1. Obvious
2. False headline
3. Obvious
4. CD--Advertising to be permitted by opticians
5. CD--Crime involving a violin
6. Obvious (Lansing is a town in New York State)
7. CD--Two New York State Senators had mistresses who were sisters
8. Obvious
9. CD--Stud tires have to be removed
10. CD--After an operation to separate twins, survivor is taken to parents
11. False
12. Obvious
13. Obvious
14. Obvious
15. CD--A man commits robbery then kills himself

16. Obvious
17. CD--A blind senior citizen graduates from college
18. Obvious
19. CD--A group of prostitutes made an appeal to the pope
20. False
21. Obvious
22. CD--Archaeologists study bones of victims of cannabalism
23. Obvious
24. CD--Death of Chester Morrill, a former federal secretary
25. CD--The complains are ugly, not the referees
26. Obvious (Reference to Brown University)
27. CD--The ban on soliciting is dead
28. Obvious
29. CD--Man is lucky because he was not also killed
30. CD--Secretaries are more than merely clerks, according to Cooper
31. CD--Agricultural bill is rejected by House of Representatives

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